

CLAIMS

What is claimed is:

1. An integrated circuit comprising:
internal circuitry;
package having at least two pins;
a first carrier communicatively coupling said internal circuitry with a first one of said at least two pins, wherein said first carrier carries a signal of a first polarity;
a second carrier communicatively coupling said internal circuitry with said first one of said at least two pins, wherein said second carrier carries a signal of a polarity opposite said first polarity;
a third carrier communicatively coupling said internal circuitry with a second one of said at least two pins, wherein said third carrier carries a signal of said first polarity; and
a fourth carrier communicatively coupling said internal circuitry with said second one of said at least two pins, wherein said fourth carrier carries a signal of a polarity opposite said first polarity.
2. The integrated circuit of claim 1 wherein said package encloses said circuitry therein.
3. The integrated circuit of claim 1 wherein said at least two pins provides an interface for said internal circuitry to a component external to said integrated circuit.
4. The integrated circuit of claim 1 wherein said first, second, third, and fourth carriers are bondwires.
5. The integrated circuit of claim 1 wherein said internal circuitry comprises resonant frequency circuitry.
6. The integrated circuit of claim 5 wherein said resonant frequency circuitry comprises a voltage controlled oscillator.
7. The integrated circuit of claim 6 wherein said voltage controlled oscillator is a differential voltage controlled oscillator.

8. The integrated circuit of claim 5 wherein said resonant frequency circuitry comprises at least one selected from the group consisting of: oscillator, resonant tank, filter, and matching circuit.

9. The integrated circuit of claim 1 wherein said resonant frequency circuitry comprises a resonant tank.

10. The integrated circuit of claim 9 wherein said resonant tank uses said first, second, third, and fourth carriers as inductors.

11. The integrated circuit of claim 1 wherein said internal circuitry uses said first, second, third, and fourth carriers as inductors.

12. The integrated circuit of claim 1 wherein said first one and said second one of said at least two pins are electrically coupled together.

13. The integrated circuit of claim 12 wherein said first one and said second one of said at least two pins are electrically coupled together external to said integrated circuit.

14. The integrated circuit of claim 12 wherein said first one and said second one of said at least two pins are electrically coupled together within said package of said integrated circuit.

15. The integrated circuit of claim 1 wherein said first, second, third, and fourth carriers are arranged in parallel interleaving the signal polarities carried thereby.

16. The integrated circuit of claim 1 wherein the carriers are arranged with said first carrier arranged as a neighbor to said second carrier, said second carrier arranged as a neighbor to said third carrier, and said third carrier arranged as a neighbor to said fourth carrier.

17. The integrated circuit of claim 1 wherein said first one and said second one of said pins are neighbor pins in said package.

18. A method comprising:

coupling a first carrier from an internal resonant frequency circuitry of an integrated circuit to an electrically common interface of the integrated circuit's package, wherein said first carrier is arranged to carry signals of a first polarity;

coupling a second carrier from said internal resonant frequency circuitry of said integrated circuit to said electrically common interface of the integrated circuit's package, wherein said second carrier is arranged to carry signals of a polarity opposite said first polarity; and

coupling a third carrier from said internal resonant frequency circuitry of said integrated circuit to said electrically common interface of the integrated circuit's package, wherein said third carrier is arranged to carry signals of said first polarity.

19. The method of claim 18 wherein said coupling said first carrier from said internal resonant frequency circuitry to said electrically common interface comprises bonding a first wire from said internal resonant frequency circuitry to said electrically common interface, wherein said coupling said second carrier from said internal resonant frequency circuitry to said electrically common interface comprises bonding a second wire from said internal resonant frequency circuitry to said electrically common interface, and wherein said coupling said third carrier from said internal resonant frequency circuitry to said electrically common interface comprises bonding a third wire from said internal resonant frequency circuitry to said electrically common interface.

20. The method of claim 18 wherein said first, second, third carriers are used as inductors for said internal resonant frequency circuitry.

21. The method of claim 18 wherein said electrically common interface comprises at least one pin.

22. The method of claim 21 wherein said electrically common interface comprises a plurality of pins that are electrically coupled together.

23. The method of claim 18 wherein said electrically common interface comprises a plurality of pins, further comprising:

electrically coupling said plurality of pins together external to said integrated circuit.

24. The method of claim 18 further comprising:
coupling a fourth carrier from said internal resonant frequency circuitry of said integrated circuit to said electrically common interface of the integrated circuit's package, wherein said fourth carrier is arranged to carry signals of a polarity opposite said first polarity.
25. The method of claim 24 wherein said electrically common interface comprises two pins that are electrically coupled together, said coupling said first, second, third, and fourth carriers from said internal resonant frequency circuitry to said electrically common interface comprises:
coupling said first and second carriers to a first one of said two pins; and
coupling said third and fourth carriers to second one of said two pins.
26. The method of claim 25 further comprising:
arranging said first, second, third, and fourth carriers to interleave the signal polarities carried thereby.
27. The method of claim 25 further comprising:
arranging said first, second, third, and fourth carriers such that the neighboring carriers of any given one of said first, second, third, and fourth carriers carry signals of opposite polarity relative to the polarity of signals carriers by said given one.
28. The method of claim 18 further comprising:
using said first, second, and third carriers as inductors for said internal resonant frequency circuitry.
29. The method of claim 18 further comprising:
arranging said first, second, and third carriers to interleave the signal polarities carried thereby.
30. The method of claim 18 wherein said internal resonant frequency circuitry comprises at least one selected from the group consisting of: oscillator, resonant tank, filter, and matching circuit.
31. The method of claim 18 wherein said internal resonant frequency circuitry comprises a resonant tank.

32. A system comprising:

resonant tank circuitry implemented in a package that provides a plurality of interface means that are electrically coupled together;

first coupling means for communicatively coupling said resonant tank circuitry to one of said plurality of interface means, wherein said first coupling means carries a signal of a first polarity; and

second coupling means for communicatively coupling said resonant tank circuitry to one of said plurality of interface means, wherein said second coupling means carries a signal of polarity opposite said first polarity.

33. The system of claim 32 wherein said first coupling means and said second coupling means are used as inductors for said resonant tank circuitry.

34. The system of claim 32 further comprising:

third coupling means for communicatively coupling said resonant tank circuitry to one of said plurality of interface means, wherein said third coupling means carries a signal of said first polarity.

35. The system of claim 34 further comprising:

fourth coupling means for communicatively coupling said resonant tank circuitry to one of said plurality of interface means, wherein said fourth coupling means carries a signal of polarity opposite said first polarity.

36. The system of claim 35 wherein said first and second coupling means couple said resonant tank circuitry to a first one of said plurality of interface means, and wherein said third and fourth coupling means couple said resonant tank circuitry to a second one of said plurality of interface means.

37. The system of claim 32 wherein said plurality of interface means are electrically coupled together external to said package.

38. The system of claim 32 further comprising a board to which said package is electrically coupled, wherein said plurality of interface means are electrically coupled together on said board.

39. A system comprising:
internal circuitry implemented in a package that provides a plurality of pins;
a first plurality of carriers communicatively coupling said internal circuitry to a first one of said plurality of pins, wherein said first plurality of carriers are used as inductors for said internal circuitry, and wherein at least one of said first plurality of carriers carries a signal of a first polarity and at least one other of said first plurality of carriers carries a signal of polarity opposite said first polarity;
a second plurality of carriers communicatively coupling said internal circuitry to a neighboring pin of said first one of said plurality of pins, wherein said second plurality of carriers are used as inductors for said internal circuitry, and wherein at least one of said second plurality of carriers carries a signal of said first polarity and at least one other of said second plurality of carriers carries a signal of polarity opposite said first polarity; and
said first plurality of carriers and said second plurality of carriers arranged to interleave the polarities of signals carried thereby.
40. The system of claim 39 wherein said plurality of pins each provide an interface for communicatively coupling to a component external to the package.
41. The system of claim 40 wherein the external component electrically couples said first pin and said neighboring pin together.
42. The system of claim 39 wherein said internal circuitry comprises resonant tank circuitry.
43. The system of claim 42 wherein said resonant tank circuitry uses said first plurality of carriers and said second plurality of carriers as inductors.
44. The system of claim 39 wherein said first one pin and said neighboring pin are electrically coupled together.